

SEP 11 2007

Nalco Docket No.: 7726-NES

Customer No. 000049459

TO EXAMINER ALICIA TOSCANO  
FAX. NO.: (571) 273-8300CERTIFICATE OF FACSIMILE TRANSMISSION  
37 C.F.R. § 1.8(a)

I hereby certify that this correspondence of 2 pages is being transmitted by facsimile to the Patent & Trademark Office by the undersigned person on the date shown below.

*Jennifer Hilary Zandyan 9-11-07*

In the United States Patent and Trademark Office

Applicant:	Duane S. Treybig, et al.	)	Examiner:	Alicia Toscano
		)		
Serial No.:	10/661,669	)	Art Unit:	1712
		)		
Date Filed:	September 12, 2003	)	Declaration under 37 C.F.R. § 1.132	

For: METHOD AND COMPOSITION FOR RECOVERING HYDROCARBON FLUIDS FROM  
A SUBTERRANEAN RESERVOIR

Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

DECLARATION OF KIN-TAI CHANG UNDER 37 C.F.R. § 1.132 TRAVERSING THE  
REJECTION OF CLAIMS 1, 3, 9, 10 AND 11 UNDER 35 U.S.C. § 102(b) OVER PATENT NO.  
4,396,499

Kin-Tai Chang declares that

1. He is a coinventor of the invention described and claimed in the above-captioned application.
2. He received a Ph.D. in organic chemistry from The Ohio State University. He has been active for over 30 years in the area of water-soluble polymers of which over 18 years are directly related to petroleum recovery. He is an inventor or coinventor on 12 patents or patent applications related to the petroleum industry and an author or coauthor of 3 publications relating to recovery of hydrocarbons from subterranean formations.
3. He has read and understood the above-captioned application, the Office Action mailed June 11, 2007 and U.S. Patent No. 4,396,499.

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4. He respectfully disagrees with the examiner's conclusion that the method of treating subterranean formations as recited in claims 1, 3 and 9-11 in the above-captioned patent application is anticipated by the disclosure of McCoy in US Patent No. 4,396,499 for the following reasons,
5. McCoy et al. clearly states (column 1, lines 55-60) that "the invention is a method for recovering petroleum from O/W bitumen emulsions by resolving or breaking these emulsions .....". The method facilitates water-oil separation in an emulsion. It treats the fluid after water and oil have already mixed.
6. Our invention modifies the surface characteristics of the pore structure in the subterranean formation. The modified pore will preferentially allow the hydrocarbon fluid to pass through and block the flow of water. Consequently, a smaller amount of the water will be co-produced with hydrocarbon fluid (page 1, lines 7-24 and page 15, lines 24-30).
7. Our invention relates to "water shut-off" methods used in petroleum production. The purpose is to reduce the amount of water being produced to the surface. This invention relates to a family of chemicals that can function as a "relative permeability modifier" (RPM), which is one of the water shut-off methods.
8. RPM's are compositions that can reduce the porous media's permeability to water but without significantly affecting the permeability to oil. The thought behind the use of RPM's is that if they are placed in a water-producing zone, the productivity of this zone will be reduced significantly. Since the system is placed without zonal isolation, it will also enter the oil-producing zones. Because the systems are designed to only reduce the water permeability, the productivity of the oil-bearing layers should not be affected. This is a method of treating porous media to change the surface characteristics of pores in rock formation.
9. Our invention is not a method to accelerate the separation of a water-oil mixture as taught by McCoy et. al. McCoy's method deals with fluid that has already been produced (column 1, lines 21-39). Our invention deals with injection of a composition into a subterranean formation to modify its permeability. There is no overlap between our method and McCoy's method.
10. He declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements and the like may jeopardize the validity of the present application or any patent issuing thereon.

Dated: Sept. 7, 2007Signed: Kin-Tai Chang  
Kin-Tai Chang